

## NEW GENERA AND SPECIES OF ACARIANS.

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In the following pages I have included descriptions of a few new genera and species of mites that have been in my possession for some time. Several of the genera are for the first time recorded in America. A note is added on two species of *Trichotarsus*. Of the two new genera, the *Liroaspis* is a very remarkable form, and finds its nearest allies in certain tropical species.

*Trombidium granulatum*, n. sp.—Bright blood red, the legs are clothed with scale-like hairs, those on the basal joints are white, elsewhere they are red, except on the apical joint of leg I., which is mostly white; the palpi and mouth-parts are mostly white, but reddish toward the tip. The body is covered above with rounded elevated granules, subequal in size and height; on the under side they are more scarce and there are some short red hairs. The body is hardly twice as long as broad, broadest at humeri, slightly constricted over base of the third legs, and broadly rounded behind; the dorsal outline at juncture of head and abdomen shows very little depression; on the cephalic part there is a median groove, and each side are two sessile eyes. The legs are short and stout, the last joint of leg I. is somewhat swollen, and plainly longer than the preceding joint; on the median joints of legs I. and II. there are above smooth stripes, where there are few hairs. The hind legs reach considerably beyond end of abdomen, the last joint is not swollen and is about equal to the penultimate. The genital opening is circular, and pale; the anal opening is elongate. The palpi are short, the second joint much swollen; the thumb is clavate, and barely passes the stout claw. Length, 1.8 mm.

A few specimens from Ft. Lee, New Jersey. This species, by its granular covering, is closely allied to the European *T. sanguineum*, Koch. In that species, however, the thumb of palpus is not clavate, but pointed, the last joint of leg I. is more swollen, the hind legs are rather shorter, and the bases of the legs are not pale in colour.

*Ammonia Americana*, n. sp. (Fig. 5).—Rather brownish yellow, with a red mark each side (in alcohol these are lost), and a reddish stripe behind, legs and palpi paler. The mandibles are short, less than the length of the cephalothorax, with two bristles each side; palpi short, second joint about three times as long as broad, third indistinctly separated from the second, about as long as broad, fourth scarcely longer

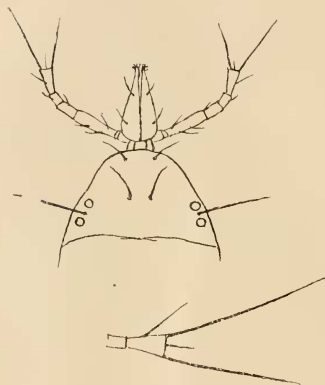


FIG. 5.

than broad, fifth about one and one-half times as long as broad at tip, with two long hairs at tip, the outer one more than twice as long as joint; body almost twice as long as broad, sides (beyond eyes) sub-parallel, broadly rounded behind; two eyes each side, and near them a long seta; two setae in front and two on middle of the cephalothorax; on anterior margin of the cephalothorax is a single black quadrangular mark with a white circle in it. Length, .75 mm. Washington, D. C. (March.)

Specimens were taken on wet ground under stones and among short grass; it is the first species of the genus that I have seen from America.

*Notophallus dorsalis*, n. sp.—Black; legs red; a large elongate red spot on the posterior median dorsum, containing the anal opening; a large eye each side on the anterior portion; some scattered short hairs above. Legs short, first pair scarcely longer than the body, fourth pair shorter than the body. Genital opening large, elliptical, divided longitudinally; palpi short, red. Length, .8 mm.

A few specimens taken at Washington, D. C., in the early spring; on ground under stones and sticks. It is the first record of the genus in this country; a genus differing from all our other Eupodidæ in having the anal opening on the dorsum.

*Cheyletus clavispinus*, n. sp.—Body pale reddish or yellowish, fading out in alcohol. Body somewhat quadrangular, corners rounded, about

one-fourth longer than broad; above on each side with two rows of about seven or eight long clavate and finely serrate bristles, one row is lateral, and one submedian; at the tip there are two long bristles and two shorter intermediate ones; the palpi are short and stout, outwardly geniculate, bearing above two prominent clavate hairs, last joint with a slender curved claw and with the usual serrate organ; first legs as long as body, tarsus slender, tipped with two hairs longer than the joint itself, penultimate joint with two clavate hairs above and two moderately long simple hairs at the tip; a few clavate hairs on the other joints; other legs with a few clavate hairs on the joints except the tarsi; fourth legs about as long as the body; venter with a few scattered simple hairs. Length, .6 mm.

Specimens were received from Dr. Blatchley, who took them from beneath the wings of an *Aradus* found near Indianapolis, Indiana. A European species has also been recorded as found on *Aradus*; but it is different from ours.

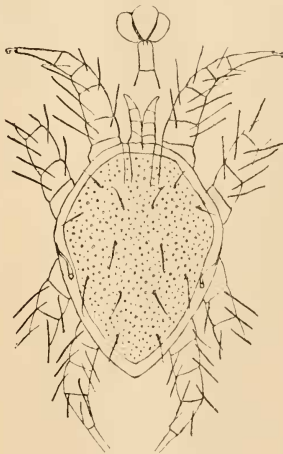


FIG. 6.

*Pteroptus Americanus*, n. sp. (Fig. 6).—Pale yellowish. Body about one and one-half times as long as broad; truncate in front, broadest just behind the second pair of legs, thence tapering to an almost acute tip; shield nearly as large as the dorsum, leaving a narrow margin all around, broader on the sides than in front; peritreme situate over the third coxæ,

arcuate; dorsal shield plainly granulate, and provided with a few scattered, short hairs; legs short and heavy, with rather long tarsi, terminating in the usual two claws and swollen pad, the basal joints with a number of stout bristles, most of them longer than the diameter of the joints. Palpi quite long, divergent. On the front of the body are seen four parallel lines, reaching back a short distance. Length, 1 mm.

From a bat in a cave in Indiana (Blatchley). Nearest to *P. euryalis* of Europe, but with a longer body, more granulate shield, and more slender tarsi. The truncate anterior margin is also peculiar. This is, I believe, the first time the genus has been recorded from this country.

*Liroaspis*, n. gen.—A Gamasid, probably related to *Lercon*. The genital opening is in front of sternal plate; the dorsal shield is divided into six pieces, a large piece in front, a smaller piece near tip, and four small median pieces arranged in a quadrangle. The claws are all very weak, especially so in the front legs. The peritreme runs along above the coxæ for a considerable distance. The body is broad, and rather flat; behind emarginate and tipped with four spine-like bristles. The anal opening is small and near tip of body. Type *L. Americana*, n. sp.

I also refer to this genus the *Seius acanthurus*, Can., described from Australia, and also recorded from Italy. Berlese puts it in *Lercon*, which, however, is distinct by the short peritreme, etc.

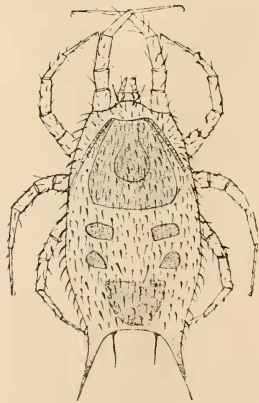


FIG. 7.

*Liroaspis Americana*, n. sp. (Fig. 7).—Yellowish throughout. Body a little more than one and one-half times as long as broad, about as broad

in front as behind, broadest in middle, sides evenly convex, each posterior angle prolonged into a spinelike process tipped with a long stout bristle. They are slightly divergent, and between them are two long stout bristles arising from the hind edge of the body. The anterior margin of the body is rounded, and prominent in the middle, and bears two submedian bristles. The dorsal surface of the body is scantily clothed with short curved bristles, and there is a row of bristles along each side-margin. There are six shields on the dorsum; in front is a large trapezoidal piece containing a paler central figure, from the anterior angle of this trapezoid a curved line extends backward and reaches the side-margin before the middle. Behind this large piece are four submedian pieces, the anterior pair longer than the posterior pair, and fully their diameter apart. Behind there is a median semicircular piece, the convexity behind. The legs are all shorter than the body and with many bristles. Length, 1.5 mm.

Specimens from Olympia, Washington, and from St. Croix Falls, Wisconsin. A remarkable and interesting species, evidently confined to northern localities.

*Hoploderma granulata*, n. sp.—Pale yellowish brown. Dorsum as high as broad, evenly convex above; about one and two-thirds times as long as broad, broadly rounded in front and behind, broadest in middle, its surface quite coarsely but evenly granulate, and provided with about twenty erect bristles, mostly situate around the margin, nearly all rather thick and blunt-pointed. Cephalothorax about once and one-third longer than broad, broadly rounded in front, finely granulate and with two long superior bristles. Ventral openings subequal in size, each about as broad as long; the anal one slightly indented behind; setæ quite long arcuate. Length, .6 mm.

Three specimens from Ottawa, Canada (Harrington). Distinct by elongate form and granulate dorsum.

*Gymnobates*, n. gen.—Tarsi with three equal claws; abdomen provided with wings, with an extension forward over the basal part of the cephalothorax. Tarsi broad at tips. Setæ short, capitate. The coxæ marginal. Sternum divided by two transverse lines. Ventral openings far apart. Type *G. glaber*.

Differs from *Oribates* in the tarsi being broad at tip, and the abdomen extending over the cephalothorax.

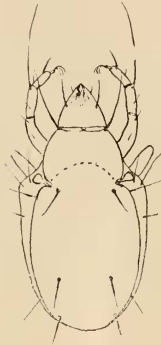


FIG. 8.

*Gymnobates glaber*, n. sp. (Fig. 8).—Pale yellowish brown. Cephalothorax smooth; about twice as long as broad, tapering in front, its basal half covered by an extension of the dorsum of abdomen; from each anterior corner of this extension is a long, stout bristle; on the cephalothorax toward tip is a bristle each side. Abdomen smooth; exclusive of wings, it is about one and three-fourths times as long as broad, broadly rounded behind; with six bristles above, two at base, two toward tip, and two on hind margin. On each side of dorsum is a slender wing, broadest in front, with four or five bristles above, three of them in front. Setæ short, capitate. Legs rather short, the second pair largest, joints sub-fusiform, tarsi broad at tip, the tibia with a long hair at tip above. A lamella behind coxa I. Genital opening nearly circular, nearly twice its diameter from the much larger anal opening, the latter sub-elliptical and emarginate in front. Length, .45 mm.

One specimen taken from a dry gall, at Washington, D. C.

*Trichotarsus osmie*, Dufour.—I have taken specimens of a species of *Trichotarsus* from a species of *Osmia*, at Sea Cliff, N. Y., which appears to agree in all particulars with this European species. It is, of course, possible that when the adult females of these forms are known, they may present differences. This species differs from the more common *T. xylocopæ* in having two claws at tips of tarsi I., II. and III

*Trichotarsus xylocopa*, Dufour.—Prof. H. Osborn has recorded this species as taken from a Californian *Xylocopa*, and sent him by Mr. Coquillett. It is a common European species.